



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

July 20, 2004

U. S. Army Corps of Engineers  
Wilmington Regulatory Field Office  
Post Office Box 1890  
Wilmington, NC 28402-1890

ATTN: Mr. Richard Spencer  
NCDOT Coordinator

Dear Sir:

Subject: **Application for Section 404 Individual Permit and Section 401 Water Quality Certification for Owen Drive Extension from I-95 Business to NC 87 located southeast of Fayetteville, North Carolina in Cumberland County.** Federal Aid No. STP-0620(1); State Project No. 8.2441101; TIP No. U-2912; \$475.00 Debit work order 8.2441101, WBS Element 34885.1.1. NCDOT Division 6.

The North Carolina Department of Transportation (NCDOT) proposes to extend Owen Drive from I-95 Business to NC 87 on new location in Cumberland County, North Carolina. The project is located immediately southeast of Fayetteville along Wilkes Road between US 301/I-95 Business and Elizabethtown Road, and along East Mountain Drive between US 301/I-95 Business and NC 87. Currently, there is a temporary entrance to the Crown Coliseum that ties into Wilkes Road. This entrance will be replaced with a permanent entrance onto the proposed Owen Drive after construction of the project is complete. The proposed cross-section is a five-lane, 64-foot, face-to-face, curb-and-gutter roadway which includes a continuous center turn lane to support the anticipated turning movements. The typical cross-section would allow for the use of reversible lanes and provides traffic storage, both of which will help with event-generated congestion. The study corridor lies in the outer Coastal Plain physiographic province and easternmost portions of the Sandhills physiographic province in Cumberland County in the Cape Fear River Basin (United States Geologic Survey [USGS] Hydrologic Catalog Unit 03030004). The let date for this project is October 19, 2004. The application consists of this cover letter, an ENG Form 4345, permit drawing meeting minutes, 8.5-inch x 11-inch permit drawings, 11-inch x 17-inch half-size plan sheets.

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**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1500  
FAX: 919-715-1501  
  
WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**  
2728 CAPITAL BLVD  
PLB SUITE 168  
RALEIGH NC 27604

**Purpose and Need:** The primary purpose of the proposed Owen Drive extension is to improve traffic capacity in the corridor between Fort Bragg and I-95. This project will provide a continuous corridor between Fort Bragg and I-95 along the All-American Freeway. A secondary purpose of this project is to create access from US 301/I-95 Business and NC 87 to the Crown Coliseum.

The corridor between Fort Bragg and I-95 will connect the All-American Freeway, Owen Drive, the proposed Owen Drive extension, and NC 87. This corridor will be the most direct link between Fort Bragg and I-95, and will be the primary corridor used for troop and equipment deployment to the port cities of Wilmington and Morehead City. Additionally, the Coliseum has proposed to locate its main entrance on the Owen Drive extension, providing direct access to US 301/I-95 Business and NC 87. The five-lane typical cross-section also allows for the use of reversible lanes and provides traffic storage, both of which will help with traffic congestion during events.

The Owen Drive extension will complete the link from Fort Bragg to I-95 and help complete a circumferential loop around the Fayetteville Central Business District Loop (CBD). The route will be classified as an urban-other principal arterial in the Functional Classification System and is designated as a proposed minor thoroughfare on the Fayetteville Urban Area (FUA) Thoroughfare Plan.

**Summary of Impacts:** Impacts to jurisdictional areas under the Clean Water Act (CWA) due to the proposed project footprint consist of the following.

- 1.6 acres of permanent impacts (fill and mechanized clearing) to riverine wetlands and 0.09 acre of impacts (fill and mechanized clearing) to non-riverine wetlands. There will be no excavation in wetlands.
- 301 linear feet of permanent stream impacts
- No temporary stream or wetland impacts
- No permanent impacts (filling or draining) to ponds

**Summary of Mitigation:** The project has been designed to avoid and minimize impacts to jurisdictional areas throughout the NEPA and design processes. Detailed descriptions of these actions are presented later in this application. Compensatory mitigation for the remaining, unavoidable impacts to 1.6 acres of riverine wetlands, 0.09 acre of non-riverine wetlands, and 301 linear feet of stream will be provided by the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP) (see attached request letter).

## **NEPA DOCUMENT STATUS**

The Environmental Assessment (EA) for this project was approved by NCDOT Division of Highways on March 10, 1995 and by the Federal Highway Administration (FHWA) on May 16, 1995. The re-evaluation of the original EA was approved by NCDOT Division of Highways and FHWA on June 28, 2001. The Finding of no Significant Impact (FONSI) was approved and signed by the NCDOT Division of Highways on June 25, 1996 and by the FHWA on June 28, 1996. The re-evaluation of the original FONSI was approved by the NCDOT Division of Highways and the FHWA in June 2002. After

approval, the documents were circulated to federal, state, and local agencies. Additional copies will be provided upon request.

### INDEPENDENT UTILITY

The project is in compliance with 23 CFR Part 771.111(f) which lists the FHWA characteristics of independent utility of a project including the following.

1. The project connects logical termini and is of sufficient length to address environmental matters on a broad scope.
2. The project is usable and a reasonable expenditure, even if no additional transportation improvements are made in the area.
3. The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

### WATERS OF THE UNITED STATES

**Delineations:** Jurisdictional areas within the study corridor were delineated by EcoScience Corporation biologists between November 14 and December 12, 2000. Guidance provided in the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (Environmental Laboratory 1987) was used for determining wetland boundaries. Jurisdictional areas were verified by David Timpy, of the USACE Wilmington District Field Office, on February 21, 2001.

As previously mentioned, jurisdictional impacts consist of 1.6 acres of permanent impacts to riverine wetlands, 0.09 acre of permanent impacts to non-riverine wetlands, 301 linear feet of stream, no temporary stream or wetland impacts, and no permanent impacts to ponds (Table 1). Detailed descriptions of impacted jurisdictional areas can be found on pages 42 to 49 of the 2001 re-evaluated EA.

**Table 1. Jurisdictional Impacts for U-2912**

Site	Permanent Riverine Wetland Impacts (acres)*	Permanent Non-Riverine Wetland Impacts (acres)*	Stream Impacts (linear feet)	Wetland Impacts Requiring Mitigation (acres)	Stream Impacts Requiring Mitigation (linear feet)
1	1.21	---	301	1.21	301
2	---	0.05	---	0.05	---
3	0.36	---	---	0.36	---
4	---	0.04	---	0.04	---
5	0.03	---	---	0.03	---
<b>Total</b>	<b>1.6</b>	<b>0.09</b>	<b>301</b>	<b>1.69</b>	<b>301</b>

\*--Includes fill and mechanized clearing

**Wetlands:** Impacts to wetlands occur at all five jurisdictional area systems within the study corridor. These systems occur as 1) Streamhead Pocosins, 2) vegetated drainage ditches, and 3) forested terrace

wetlands. Compensatory wetland mitigation in the Cape Fear River Basin will be required for all 1.69 acres of wetland impacts. Table 2 summarizes information for each of the wetland impact sites associated with U-2912. A description of each site follows.

**Table 2. Jurisdictional Wetland Information for U-2912**

Site	Station No.	Cowardin Classification*	Schafale and Weakley (1990) Classification	Impact Type**	DEM Rating	Total Impact (acres)
1	17+25 to 18+70	PF04/1B	Streamhead Pocosin	F, M	83	1.21
2	32+85 RT to 33+65 RT	PEM1G	vegetated drainage ditch***	F, M	58	0.05
3	33+38 LT to 34+16 LT	PF04A	forested terrace***	F	21	0.36
4	37+20 LT to 37+85 LT	PEM1G	vegetated drainage ditch***	M	58	0.04
5	Watson Lake Road	PF04A	forested terrace***	F, M	21	0.03
<b>Total</b>						<b>1.69</b>

\*--P=palustrine; FO=forested; EM1=persistent emergent; 1=broad-leaved deciduous; 4=needle-leaved evergreen; A=temporarily flooded; B=saturated; G=intermittently flooded

\*\*--F=fill; M=mechanized clearing

\*\*\*--These communities did not match a Schafale and Weakley community classification; therefore, community descriptions follow those used in the 2001 re-evaluated EA.

Site 1: The riverine wetland at this site supports a Streamhead Pocosin that occurs at the base of the terrace scarp. This wetland is classified on NWI mapping as palustrine, forested, needle-leaved evergreen/broad-leaved deciduous systems with saturated soils (PF04/1B). Wetland vegetation species are representative of a pocosin plant community and include Virginia willow (*Itea virginica*), sweet pepperbush (*Clethra alnifolia*), sweet bay (*Magnolia virginiana*), dog hobble (*Leucothoe fontanesiana*), and cinnamon fern (*Osmunda cinnamomea*). From a concurrence meeting April 11, 2002 the agencies agreed for NCDOT to culvert this Streamhead Pocosin system.

Sites 2 and 4: The non-riverine wetlands at Sites 2 and 4 are vegetated drainage ditches. Drainage ditches within the study corridor were considered to be jurisdictional if the substrates supported hydrophytic vegetation and had no scoured channel. These wetland systems are classified as palustrine, persistent emergent systems that are intermittently flooded (PEM1G). The sites are characterized by rushes (*Juncus* spp.), sedges (*Carex* spp.), and cattails (*Typha* spp.)

Sites 3 and 5: These riverine forested wetlands occur on stream terraces. Forested wetlands within the study corridor are associated with the Cape Fear River terrace, occur on level areas, and are classified on NWI mapping as palustrine, forested, needle-leaved evergreen systems characterized by temporary flooding (PF04A). Previous disturbances have replaced most of the pine-dominated cover type with mixed deciduous/pine forests of variable stand ages. This site is characterized by sycamore (*Platanus*



*occidentalis*), highbush blueberry (*Vaccinium corymbosum*), sweet bay, pond pine (*Pinus serotina*), and netted chain-fern (*Woodwardia areolata*).

**Streams:** Impacts to jurisdictional streams occur within Site 1 to three unnamed tributaries to Pearces Mill Creek within the Cape Fear River Basin (USGS Hydrologic Catalog Unit 03030004, DWQ Subbasin 03-06-15). Compensatory mitigation in the Cape Fear River Basin will be required for all 301 linear feet of stream impacts. Table 3 summarizes the information for each of the stream impacts associated with U-2912. A description of the three study corridor tributaries follows.

**Table 3. Jurisdictional Stream Information for U-2912**

Site	Station No.	Structure	Stream	Stream Impacts		
				DWQ Index No./Classification	Impact (linear feet)	Mitigation Required (linear feet)
1	17+60-L-	60-inch RCP (pipe culvert)	UT 1 to Pearces Mill Creek	18-(30)/C	154	154
1	18+20-L-	no structure	UT 2 to Pearces Mill Creek	18-(30)/C	26	26
1	18+60-L-LT	no structure	UT 3 to Pearces Mill Creek	18-(30)/C	121	121
<b>Total</b>					<b>301</b>	<b>301</b>

Unnamed Tributary 1 to Pearces Mill Creek: The Unnamed Tributary (UT) 1 to Pearces Mill Creek is the main tributary draining the study corridor, which receives flow from upland hillside seeps and streamheads, bottomland terrace wetlands and streams, and drainage ditches. This tributary is perennial and has an average width of 4 feet and an average depth of 6 to 18 inches. The substrate consists of sand and silt, and water flow is moderate. A 60-inch RCP will be installed to culvert part of this stream and the Streamhead Pocosin system at this site.

Unnamed Tributaries 2 and 3 to Pearces Mill Creek: These tributaries are perennial and have an average width of 2 feet and an average depth of 4 inches. The substrate is sand, and water flow is moderate. No culverts are required for these streams because the drainage area does not cross the fill slope of the project.

The stream in question from the meeting minutes dated December 12, 2002 (Sheet 12) was determined to be non-jurisdictional per Dave Timpy of the USACE.

No designated High Quality Waters (**HQW**), Outstanding Resource Waters (**ORW**), Water Supply I (**WS-I**), or Water Supply II (**WS-II**) waters occur within 1 mile of the study corridor.

Pearces Mill Creek and its tributaries are not listed in any section of the North Carolina 2002 Section 303(d) list.

## PROTECTED SPECIES

Plants and animals with a federal classification of Endangered or Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of February 26, 2001, the U.S. Fish and Wildlife Service (FWS) listed eight federally protected species for Cumberland County. Systematic surveys were conducted within suitable habitat for these eight species between November 2000 and August 2001. Details of these surveys are discussed in the February 2001 Natural Systems Report and the July 2001 and September 2001 Protected Species Survey reports. At that time, the surveys resulted in Biological Conclusions of "No Effect" for all eight species. The FWS concurred with these findings in a letter dated November 5, 2001. In the spring of 2004, the FWS requested that surveys for federally listed species be updated because the original Biological Conclusions had expired. The FWS determined that results of 2001 surveys for the satyr butterfly remain sufficient, and no additional work is required for this species. There is no habitat for Michaux's sumac in the chosen alternative; therefore, an additional survey for this species was not required. Since the most recent Cumberland County list of federally protected species (January 29, 2003) does not include small-whorled pogonia, an additional survey for this species was not required.

Re-surveys for the remaining species occurred in March 2004 and May 2004 and resulted in a biological conclusion of "May Affect, Not Likely to Adversely Affect" for all species. Species characteristics, distribution, and habitat details, along with survey and biological conclusion information were reported in the previously referenced 2001 re-evaluated EA (pages 52 to 59) and the 2002 re-evaluated FONSI (pages 12 to 17), as well as the June 2004 Protected Species Survey report. The FWS has concurred with these biological conclusions in a letter dated June 23, 2004 and both concurrence letters are enclosed with this application.

**Table 4. Federally Protected Species for Cumberland County**

Scientific Name	Common Name	Biological Conclusion	Status
<i>Alligator mississippiensis</i>	American alligator	N/A	T(S/A)
<i>Lindera melissifolia</i>	Pondberry	May Affect-Not Likely To Adversely Affect	E
<i>Lysimachia asperulaefolia</i>	Rough-leaved loosestrife	May Affect-Not Likely To Adversely Affect	E
<i>Neonympha mitchellii francisci</i>	Saint Francis' satyr	No Effect	E
<i>Picoides borealis</i>	Red-cockaded woodpecker	May Affect-Not Likely To Adversely Affect	E
<i>Rhus michauxii</i>	Michaux's sumac	No Effect	E
<i>Schwalbea americana</i>	American chaffseed	May Affect-Not Likely To Adversely Affect	E

"E" denotes Endangered (a species that is in danger of extinction throughout all or a significant portion of its range)

"T" denotes Threatened (a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range)

"T(S/A)" denotes Threatened due to similarity of appearance

## **CULTURAL RESOURCES**

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800. Section 106 requires that if a federally funded, licensed, or permitted project has an effect on a property listed in or eligible for the National Register of Historic Places, the Advisory council on Historic Preservation be given an opportunity to comment. This project is also subject to compliance with Section 4(f) of the Department of Transportation Act of 1966, as amended.

Archaeology: A survey conducted by an NCDOT archaeologist concluded that two archaeological sites, designated 31Cd861/861\*\* and 31Cd862, are located partially within or near the study corridor. The results of archaeological studies indicate that neither of these sites is eligible for inclusion in the National Register of Historic Places. Since there are no properties either listed in or eligible for listing in the National Register of Historic Places in the area of potential effect of this undertaking, no further compliance with either Section 106 of the National Historic Preservation Act of 1966 or with Section 4(f) of the Department of Transportation Act of 1966 is required. A letter from the State Historic Preservation Office (SHPO) concurring with these findings can be found in Appendix B of the 2001 re-evaluated EA.

Historic: The area of potential effect (APE) for this project was determined, and the APE was reviewed to identify any historic architectural resources located in the area. On December 21, 2000, SHPO and NCDOT reviewed photos of structures over 50 years of age located within the APE. The SHPO concurred that none of the structures appeared to be eligible for listing in the National Register of Historic Places and a concurrence form was signed. This concurrence form can be found in Appendix B of the 2001 re-evaluated EA.

## **UTILITY IMPACTS**

No utility impacts are expected as a result of the proposed extension of Owen Drive.

## **FEMA COMPLIANCE**

According to the NCDOT Hydraulics engineers, there is no FEMA involvement with this project.

## **ICE STUDY**

An Indirect and Cumulative Effects (ICE) Assessment for Transportation Improvement Program (TIP) project U-2912 in Cumberland County, North Carolina is being finalized and will be submitted to the agencies in August 2004.

The ICE Assessment includes project documentation, background information, and a definition of the study area(s). It also includes the identification of regional influences, growth and development trends,

current transportation plans, land use plans, environmental regulations, and an inventory of notable features. The assessment also consists of the identification of activities that cause effects, any potential indirect and cumulative effects, analysis of these indirect and cumulative effects, and finally an evaluation of the results.

### **WILD AND SCENIC RIVERS**

The project will not impact any Designated Wild and Scenic Rivers or any rivers included in the list of study rivers (Public Law 90-542, as amended).

### **ESSENTIAL FISH HABITAT**

The project will not impact any Essential Fish Habitat (EFH) afforded protection under the Magnuson-Stevens Act of 1996 (16 USC 1801 *et seq.*).

### **MITIGATION OPTIONS**

The USACE has adopted, through the Council on Environmental Quality (CEQ), a wetland mitigation policy that embraces the concept of “no net loss of wetlands” and sequencing. The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of waters of the United States. Mitigation of wetland and surface water impacts has been defined by the CEQ to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts (40 CFR 1508.20). Executive Order 11990 (Protection of Wetlands) and Department of Transportation Order 5660.1A (Preservation of the Nations Wetlands) emphasize protection of the functions and values provided by wetlands. These directives require that new construction in wetlands be avoided as much as possible and that all practicable measures are taken to minimize or mitigate impacts to wetlands.

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts, and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during project planning, and minimization measures were incorporated as part of the project design.

**AVOIDANCE:** All wetland areas not affected by the project will be protected from unnecessary encroachment.

1. **Equipment:** No staging of construction equipment or storage of construction supplies will be allowed in wetlands or near surface waters.
2. **Alignment Shift:** The alignment of the chosen alternative was shifted to avoid impacts to jurisdictional areas consisting of a vegetated drainage ditch and a man-made pond located on the south side of East Mountain Drive.
3. **Aquatic Life Movement:** The project was designed to avoid disturbance to aquatic life movements. As requested by the NCDWQ, NCDOT will counter sink all culverts one foot at

Site 1 (Stations 17+60-L-, 18+20-L-, and 18+60-L-LT), Site 3 (Station 33+38 to 34+16-L-LT), Site 4 (Station 37+20 LT to 37+85-L-LT), and Site 5 (Watson Lake Road) to allow unimpeded passage by fish and other aquatic organisms (Sheets 3, 5, 6, and 7 of 10 of the permit drawings).

**MINIMIZATION:** Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts. Minimization techniques implemented include the following.

1. **Erosion Control:** NCDOT has designed “adequate erosion control measures” and will ensure, where practicable, that sediment and erosion control devices are not placed in wetlands. NCDOT would like to reserve the option of placing such erosion control devices in wetlands where such placement is the only measure to deter excessive sedimentation. Preformed scour holes are being placed at Site 1 to dissipate energy and reduce erosion.
1. **Fill Slopes/Canopy Removal/Median Widths:** Reduction of fill slopes, canopy removal in or near floodplain systems, and median widths at stream/wetland crossings will minimize unnecessary wetland losses.
2. **Ditching:** It is the policy of the NCDOT to eliminate lateral ditching in wetlands as much as possible, thus preserving the hydrology of adjacent wetlands.
3. **Symmetric and Asymmetric Widening:** NCDOT has used a combination of symmetric and asymmetric widening in order to avoid and minimize impacts to jurisdictional areas where practicable.
4. **Pipes:** As requested by the North Carolina Wildlife Resources Commission (WRC), a pipe previously shown as 48 inches was increased to 60 inches within Site 1 (Stations 17+60-L-, 18+20-L-, and 18+60-L-LT) to allow for the passage of small mammals (Sheet 3 of 10 of the permit drawings).
5. **Alignment Shift:** The alignment of the widening of East Mountain Drive near NC 87 has been shifted to minimize impacts to other jurisdictional areas associated with the chosen alternative at Site 1 (Sheet 3 of 8 of the permit drawings). The wetland impacts will be reduced by 0.25 acres.

**COMPENSATION:** The primary emphasis of compensatory mitigation is to reestablish a condition similar to what would have existed if the project was not built. As previously stated, mitigation is limited to reasonable expenditures and practicable considerations related to highway operation. Mitigation is generally accomplished through a combination of methods designed to replace wetland functions and values lost as a result of construction of the project. These methods consist of restoration of wetlands; enhancement of existing wetlands; and creation of new wetlands from uplands, borrow pits, and other non-wetland areas. Where such options may not be available, or when existing wetlands and wetland-surface water complexes are considered to be important resources worthy of preservation, consideration is given to preservation as at least one component of a compensatory mitigation proposal.

Based upon agreements stipulated in the “Memorandum of Agreement Among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District” (MOA), it is understood that the EEP will assume responsibility for satisfying the CWA compensatory mitigation requirements for NCDOT

projects that are listed in Exhibit 1 of the subject MOA during the EEP transition period which ends on June 30, 2005.

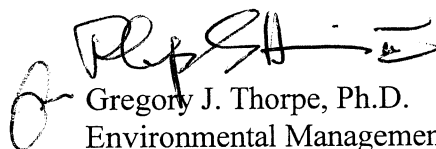
Since the subject project is listed in Exhibit 1 of the MOA, the necessary compensatory mitigation to offset unavoidable impacts to waters that are jurisdictional under the CWA will be provided by the EEP. The offsetting mitigation will derive from an inventory of assets already in existence within the same eight-digit USGS cataloging unit (USGS Hydrologic Catalog Unit 03030004). The NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable impacts to 1.6 acres of permanent impacts to riverine wetlands, 0.09 acre of impacts to non-riverine wetlands, and 301 linear feet of jurisdictional streams will be offset by compensatory mitigation at a 2:1 ratio provided by the EEP. Mitigation needed is as follows: 3.2 ac of riverine wetlands, 0.18 ac of non-riverine wetland and 602 ft of streams. Enclosed with this application is a letter requesting this mitigation from EEP.

### REGULATORY APPROVALS

Application is hereby made for a Department of the Army Individual 404 Permit and a Section 401 Water Quality Certification from the N.C. Department of Environment and Natural Resources (DENR) DWQ as required for the activities described above. In compliance with Section 143-215.3D(e) of the NCAC, we will provide \$475.00 to act as payment for processing the Section 401 permit application previously noted in this application (see Subject line). Seven copies of this application are provided to the DWQ for review.

If you have any questions or need additional information please contact Rachelle Beauregard at 919-715-1383.

Sincerely,



Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA

cc: w/attachment

Mr. John Hennessy, NCDWQ (7 copies)  
Mr. Travis Wilson, NCWRC  
Ms. Becky Fox, USEPA – Whittier, NC  
Mr. Ronald Mikulak, USEPA – Atlanta, GA  
Mr. Gary Jordan, USFWS  
Mr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. T. Johnson, P.E, Division 6 Engineer  
Mr. Jim Rerko, Division 6 Environmental Officer

w/o attachment

Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Mark Staley, Roadside Environmental  
Mr. David Franklin, USACE, Wilmington  
Mr. Vince Rhea, PDEA Project Planning Engineer  
Ms. Beth Harmon, EEP

The public reporting burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided, the permit application cannot be processed nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANTS NAME North Carolina Department of Transportation Planning and Environmental Branch	8. AUTHORIZED AGENTS NAME AND TITLE (an agent is not required) N/A
6. APPLICANTS ADDRESS North Carolina Department of Transportation Project Development & Environmental Analysis Branch Attention: Gregory J. Thorpe, Ph.D. 1548 Mail Service Center Raleigh, NC 27699-1548	9. AGENTS ADDRESS N/A
7. APPLICANTS PHONE NOS. WITH AREA CODE a. Residence b. Business (919) 733-3141	10. AGENTS PHONE NOS. WITH AREA CODE a. Residence N/A b. Business

11. STATEMENT OF AUTHORIZATION
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I hereby authorize, ----- to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANTS SIGNATURE	DATE
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NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY
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12. PROJECT NAME OR TITLE(see instructions)  
Owen Drive Extension from I-95 Business to NC 87 located southeast of Fayetteville, North Carolina in Cumberland County, Federal Aid No. STP-0620(1), State Project No. 8.2441101, TIP No. U-2912, WBS Element 34885.1.1.

13. NAME OF WATERBODY, IF KNOWN (if applicable) Unnamed tributaries to Pearces Mill Creek	14. PROJECT STREET ADDRESS (if applicable) N/A
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LOCATION OF PROJECT  Cumberland COUNTY NC STATE	
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16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) See the June 2001 re-evaluated Environmental Assessment (EA) and June 2002 re-evaluated Finding of No Significant Impact (FONSI).	
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18. Nature of Activity (Description of project, include all features)

The North Carolina Department of Transportation (NCDOT) proposes to extend Owen Drive from I-95 Business to NC 87 in Cumberland County, North Carolina. The proposed cross-section is a five-lane, 64-foot, face-to-face, curb-and-gutter roadway which includes a continuous center turn lane.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The main purpose of the proposed Owen Drive extension is to improve the traffic capacity in the corridor between Fort Bragg and I-95. This project will provide a continuous corridor between Fort Bragg and I-95 along the All-American Freeway. A secondary purpose of this project is to create access from US 301/I-95 Business and NC 87 to the Crown Coliseum. More detailed descriptions of the purpose and need of the project can be found in the 2001 re-evaluated EA and the 2002 re-evaluated FONSI.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Proposed extension of Owen Drive from I-95 Business to NC 87 in Cumberland County, North Carolina. The proposed cross-section is a five-lane, 64-foot face-to-face, curb-and-gutter roadway which includes a continuous center turn lane.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

See the attached permit drawings.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

See sheet 9 of the attached permit drawings.

23. Is Any Portion of the Work Already Complete? YES NO ☒ IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

See sheet 8 of the attached permit drawings.

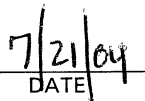
25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

Agency	Type approval*	Identification number	Date applied	Date approved	Date Denied
USACE	Section 404	AID. 199901232	May 29, 1999		July 19, 1999

\*Would include but is not restricted to zoning, building, and flood plain permits.

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

  
SIGNATURE OF APPLICANT

  
DATE

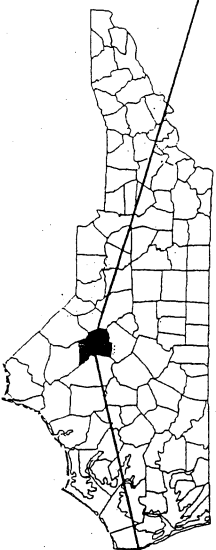
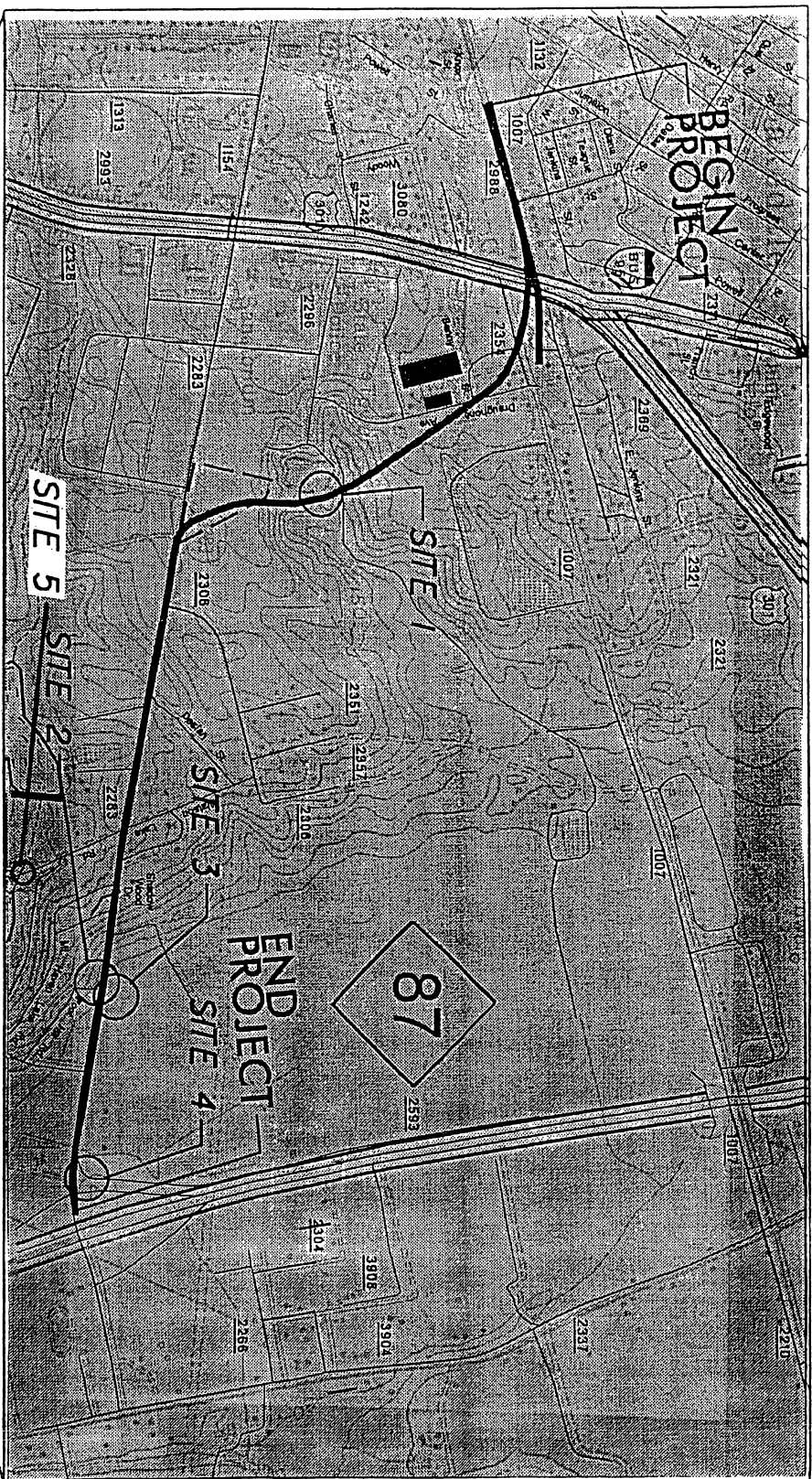
\_\_\_\_\_  
SIGNATURE OF AGENT

\_\_\_\_\_  
DATE

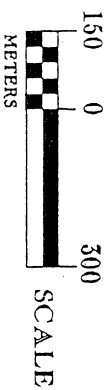
The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statements of entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.





## SITE MAP



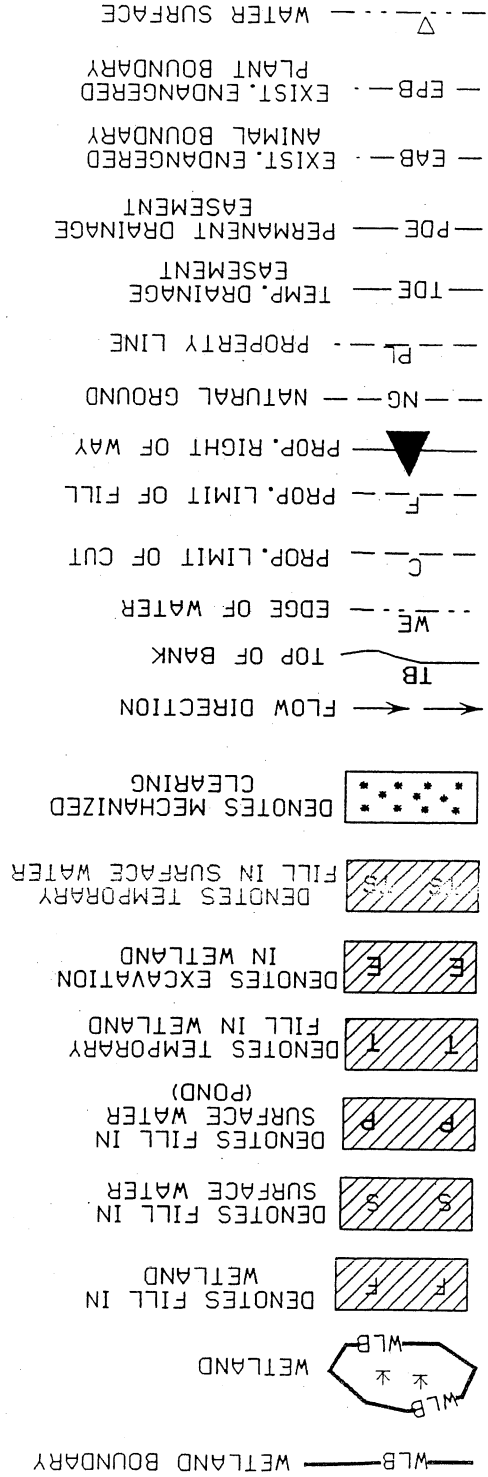
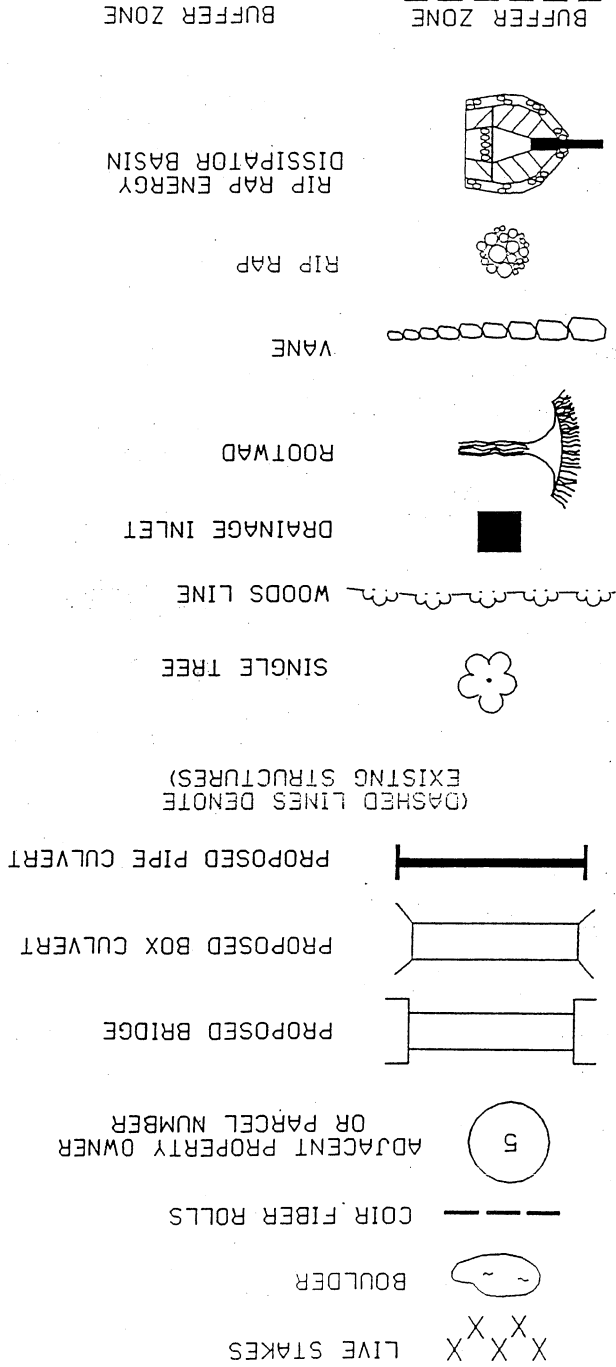
N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: 3485.11 (U-2912)  
OWEN DRIVE EXTENSION

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

PROJECT: 3485.11 (U-2912)  
OWEN DRIVE EXTENSION

SHEET 2 OF 10





400 CSP

33+00

-LREV-

33+40

375

CB

375 mm CS

EAST MOUNTAIN DR. SR 2283

3.3 BST

1200 mm CHL

VERNON WOOD

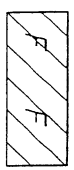
FOOT HILL DR

ELSIE MONTGOMERY

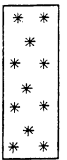
1200 mm CHL

ELSIE MONTGOMERY

3.1 CONC

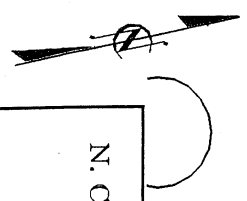


DENOTES FILL IN  
WETLANDS



DENOTES MECHANIZED  
CLEARING

# PLAN VIEW SITE 2



N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: 34885.1.1 (U-2912)  
OWEN DRIVE EXTENSION

MARY CRAIG STEWART

MARY CRAIG STEWART

CL. B RIPRAP  
OUTLET PROTECTION  
(TYP.)

33+40

34+00

CL. B RIPRAP  
OUTLET PROTECTION

PDE  
LAT. V DITCH

PDE  
LAT. BASE DITCH

E

E

E

PDE

PDE

PDE

PDE



-LREV-

EAST MOUNTAIN DR. SR 2283

CB

400 mm CSP

CB

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

375 mm RCP

900 mm RCP

COLLAR &  
EXTEND 900

RETAIN EX.  
900 MM RCP

F

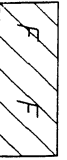
PLAN VIEW

SITE 3



METERS

SCALE



DENOTES FILL IN  
WETLANDS



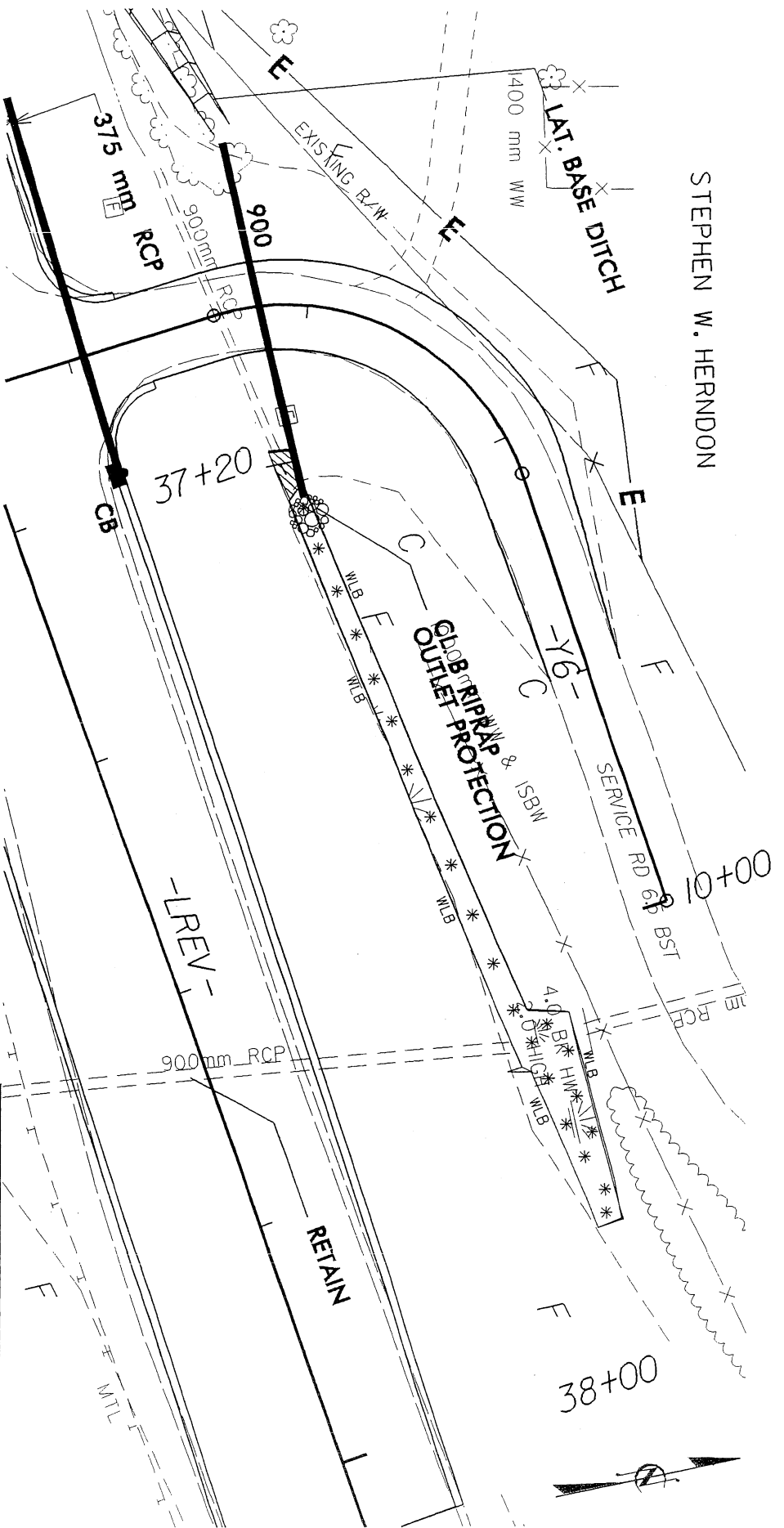
N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

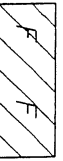
PROJECT: 3485.1.1 (U-2912)  
OWEN DRIVE EXTENSION

SHEET 5 OF 10

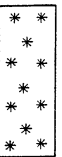
STEPHEN W. HERNDON



# PLAN VIEW SITE 4

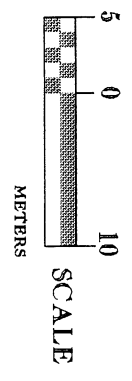
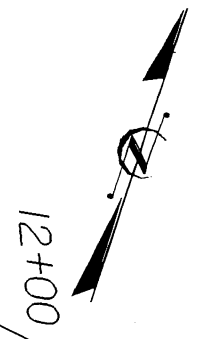


DENOTES FILL IN  
WETLANDS



DENOTES MECHANIZED  
CLEARING

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: 34885.11 (U-2912)  
OWEN DRIVE EXTENSION  
SHEET 6 OF 10



- DENOTES FILL IN WETLANDS
- DENOTES MECHANIZED CLEARING

PLAN VIEW  
SITE 5

GEORGETTE LEFFEW

HAROLD A. TOLAR

J BOX W/  
SLAB LID

CL. B RIPRAP  
OUTLET PROTECTION

WATSON LAKE ROAD

Tri'd to Cape Fear River  
(Lake approx. 4.50m above R.R.M.R.)  
(Lake approx. 50m downstream)

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: (U-2912)  
OWEN DRIVE EXTENSION

## Form Revised 3/22/01

# SHIELD

SHEET 8 OF 10

DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: 34885.1.1(U-2912)  
OWEN DRIVE EXTENSION



## WETLAND IMPACTS

## SURFACE WATER IMPACTS

Site No.	Station (From/To)	Structure Size / Type	Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)
1	17+60 -L-  18+20 -L-  18+80 -L- LT	60" RCP	0.69  0.40			0.08  0.04	0.02  0.01			154  26  121	
2	32+85 TO 33+65 -L- RT		0.01			0.04					
3	33+38 TO 34+16 -L- LT	15" RCP	0.36								
4	37+20 TO 37+85 -L- LT	36" RCP	<0.01			0.04					
5	WATSON LAKE ROAD	24" RCP	0.01			0.01					
TOTALS:			1.47	0	0	0.21	0.03	0	0	301	0

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
CUMBERLAND COUNTY  
PROJECT: 34885.1.1 (U-2912)  
SHEET 9 OF 10

# PROPERTY OWNER

## NAME AND ADDRESS

OWNER'S NAME	ADDRESS
STATE OF NORTH CAROLINA	116 WEST JONES ROAD RALEIGH, NC 27603
CUMBERLAND COUNTY	PO BOX 449 FAYETTEVILLE, NC 28302-0449
VERNON WOOD	2741 MT. HAVEN DR. FAYETTEVILLE, NC 28306
ELSIE MONTGOMERY	882 EAST MOUNTAIN DR. FAYETTEVILLE, NC 28306
MARY CRAIG STEWART	1427 CHADSFORD PLACE CHARLOTTE, NC 28211
HAROLD A. TOLAR	P.O. BOX 87104 FAYETTEVILLE, NC 28304
GEORGETTE LEFFEW	636 EAST MOUNTAIN DR. FAYETTEVILLE, NC 28306

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

PROJECT: 34885.1.1 (U-2912)  
OWEN DRIVE EXTENSION

**April 25, 2003**

**Subject:** Draft Minutes Interagency Permit Drawing Review Meeting on April 24, 2003, for U2921, Cumberland County.

Team Members:

Dave Timpy – USACE	(Present)
John Hennessy – NCDWQ	(Present)
Travis Wilson – NCWRC	(Present)
Gary Jordan – USFWS	(Absent)
Christopher Militscher – USEPA-Raleigh	(Absent)
Heather Montague – NCDOT PDEA	(Present)
Jimmy Goodnight – NCDOT Roadway Design	(Absent)*

Participants:

David Chang – NCDOT Hydraulics  
Elizabeth Lusk – NCDOT PDEA  
Marshall Clawson – NCDOT Hydraulics  
Anne Gamber – NCDOT Hydraulics

\*The time of the meeting had been changed and Jimmy Good night was not informed of the informed of the new meeting time.

The meeting began with a discussion of the history of the project. Each site was reviewed. The only comment pertained to Site 1. There seemed to be an existing dry detention basin in this area. John Hennessy questioned whether it would be used in conjunction with the drainage design. Since this was a permit review, the design engineer was not in attendance. Marshall Clawson agreed to verify this with the design engineer.

**Subject:** Minutes of the Interagency Hydraulic Design Review Meeting on  
December 12, 2002 for U-2912, Cumberland County

**Team Memebers:**

David Timpy	USACE (ABSENT)
John Hennessy	NCDWQ (PRESENT)
David Cox	NCWRC (PRESENT)
Gary Jordan	USFWS (ABSENT)
Chris Militscher	USEPA (PRESENT)
Rachelle Beauregard	PD&EA (PRESENT)

<b>Participants:</b> David Chang	DOT-Hydraulics	919-250-4100
Susan Locklear	DOT-Hydraulics	919-250-4100
Marshall Clawson	DOT-Hydraulics	919-250-4100
Steve Bondor	Arcadis	854-1282
Jimmy Goodnight	DOT-Roadway	919-250-4016
Tim Goins	DOT-Roadway	919-250-4016

\*\*\*Comments were received prior to the meeting, per e-mail, from David Timpy.

**Sheet 7: Pipe.** David Cox requested that the pipe currently shown as a 1200 mm (48") be increased to 1500 mm (60"). This system is nice enough that it will have small mammals and this will allow for better passage, especially considering the high fill.

**Sheet 12: Perennial.** David Cox and John Hennessey both believe this site to be a perennial stream impacted long ago. Rachelle Beauregard is to have the Corp take a look at it and make a call. Steve Bondor and Susan Locklear are to attend this site visit, also. If site is jurisdictional, consideration will be given to creating on-site mitigation by use of Rosgen Natural Stream Design at the location of impact.

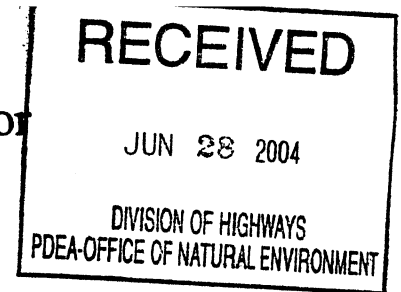


# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

June 23, 2004



Phillip Harris, III  
North Carolina Department of Transportation  
Project Development and Environmental Analysis  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Harris:

This letter is in response to your letter of June 14, 2004 which provided the U.S. Fish and Wildlife Service (Service) with the biological determination of the North Carolina Department of Transportation (NCDOT) that the proposed Owen Drive Extension in Cumberland County (TIP No. U-2912) may affect, but is not likely to adversely affect the federally endangered American chaffseed (*Schwalbea americana*), red-cockaded woodpecker (*Picoides borealis*), rough-leaved loosestrife (*Lysimachia asperulaefolia*) and pondberry (*Lindera melissifolia*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to the information you submitted, surveys were conducted for the red-cockaded woodpecker and pondberry on March 30, 2004. Surveys were conducted for American chaffseed and rough-leaved loosestrife on May 28, 2004. No specimens of the species were observed. Based on the information provided and other information available, the Service concurs with your determination that the project may affect, but is not likely to adversely affect the American chaffseed, red-cockaded woodpecker, rough-leaved loosestrife or pondberry. We believe that the requirements of section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

Garland B. Pardue, Ph.D.  
Ecological Services Supervisor

cc: Richard Spencer, USACE, Wilmington, NC  
Beth Barnes, NCDWQ, Raleigh, NC  
Travis Wilson, NCWRC, Creedmoor, NC  
Chris Militscher, USEPA, Raleigh, NC



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Raleigh Field Office  
Post Office Box 38726  
Raleigh, North Carolina 27636-3726

November 5, 2001

Mr. William D. Gilmore, P.E., Manager  
NCDOT  
Project Development and Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Attention: Alice Gordon

Dear Mr. Gilmore:

Thank you for your letter of October 19, 2001, providing the U.S. Fish and Wildlife Service (Service) with the Protected Species Survey Reports for the Owen Drive Extension project, Cumberland County, North Carolina (TIP No. U-2912). This report is provided in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

The North Carolina Department of Transportation (NCDOT) previously presented the results of surveys for the following federally-listed species: American alligator (*Alligator mississippiensis*) listed as Threatened (TS/A) due to its similarity of appearance to the American crocodile, Michaux's sumac (*Rhus michauxii*), and the red-cockaded woodpecker (*Picoides borealis*). TS/A species are not subject to section 7 consultation and a biological conclusion is not required. Conclusions of "No Effect" were rendered for Michaux's sumac and the red-cockaded woodpecker.

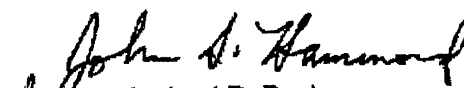
The current surveys address the remaining five federally-listed species known to occur in Cumberland County. Based on the results of additional field surveys, conclusions of "No Effect" were reached for the Saint Francis' satyr (*Neonympha mitchellii francisci*), rough-leaved loosestrife (*Lysimachia asperulaefolia*), American chaffseed (*Schwalbea americana*), small whorled pogonia (*Isotria medeoloides*), and pondberry (*Lindera melissifolia*).

The Service considers these reports to be an accurate representation of the surveys and results for these species, and their habitats. Based on the information provided, the Service concurs that this project, implemented as described, will have "No Effect" on any of the species listed above.

Note that this concurrence applies only to the referenced species up to the date of this letter. Should additional information become available relative to the referenced species, or other listed species, this "No Effect" determination may be reconsidered and additional surveys may be required.

The Service appreciates the opportunity to comment on this document. Please advise us of any changes in project plans. If you have any questions regarding these comments, contact Tom McCartney at (919) 856-4520, Ext. 32.

Sincerely,

  
for Dr. Garland B. Pardue  
Ecological Services Supervisor

cc: COE, Wilmington, NC (David Timpy)

FWS/R4:TMcCartney:TM:11/05/01:919/856-4520 extension 32:\u-2912.esp



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

RECEIVED

JUL 6 2004

NC ECOSYSTEM  
ENHANCEMENT PROGRAM

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

June 28, 2004

Mr. William D. Gilmore, P.E.  
EEP Transition Manager  
Ecosystem Enhancement Program  
1652 Mail Service Center  
Raleigh, NC 27699-1652

Dear Sir:

Subject: Cumberland County. Owen Drive Extension. Extend Owen Drive from I-95 Business to NC 87 in Cumberland County, North Carolina. Federal Aid No. STP-0620(1), State Project No. 8.2441101, TIP No. U-2912.

The purpose of this letter is to request that the Ecosystem Enhancement Program (EEP) provide confirmation of willingness to provide compensatory mitigation for the project in accordance with the Memorandum of Agreement (MOA) signed July 22, 2003 by the U.S. Army Corps of Engineers (ACE), the N.C. Department of Natural Resources (DENR) and the N.C. Department of Transportation (NCDOT).

The NCDOT proposes to extend Owen Drive from I-95 Business to NC 87 in Cumberland County, North Carolina. The project is located immediately southeast of Fayetteville along Wilkes Road between US 301/I-95 Business and Elizabethtown Road, and along East Mountain Drive between US 301/I-95 Business and NC 87. The proposed cross-section is a five-lane, 64-foot, face-to-face, curb-and-gutter roadway which includes a continuous center turn lane.

**RESOURCES UNDER THE JURISDICTION OF SECTION 404 AND 401 OF THE CLEAN  
WATER ACT**

We have avoided and minimized the impacts to jurisdictional resources to the greatest extent possible as described in the permit application. A copy of the permit application can be found at <http://www.ncdot.org/planning/pe/naturalunit/Applications.html>. The remaining unavoidable impacts to

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1500  
FAX: 919-715-1501

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

LOCATION:  
2728 CAPITAL BLVD  
PLB SUITE 168  
RALEIGH NC 27604



jurisdictional resources will be compensated for by mitigation provided by the EEP. We estimate that 301 linear feet of jurisdictional streams and 1.69 acres of jurisdictional wetlands will be impacted.

The project is located in the outer Coastal Plain physiographic province and the eastern Sandhills physiographic province in Cumberland County in the Cape Fear River Basin (Hydrologic Catalog Unit 03030004).

- The stream impacts, summarized in Table 1, will be to three first-order perennial streams that occur within Site 1. All of these streams are tributaries to Pearces Mill Creek [DWQ #18-(30)]. We propose to mitigate for the 301 feet of stream impacts at a ratio of 2:1 for a total of 602 feet of needed stream mitigation by using the EEP.
- The wetland impacts, summarized in Table 1, total 1.69 acres. Wetland impacts consist of 1.6 acres of permanent impacts to riverine wetlands and 0.09 acre of permanent impacts to non-riverine wetlands. These riverine and non-riverine wetland systems occur as 1) Streamhead Pocosins, 2) vegetated drainage ditches, and 3) forested terrace wetlands. We propose to provide compensatory mitigation for the wetland impacts at a 2:1 ratio by using the EEP. Total mitigation needed for riverine wetlands is 3.2 ac and total mitigation needed for non-riverine wetlands is 0.18 ac

**Table 1: Summary of Jurisdictional Impacts**

Site	Station(s)	Permanent Impacts to Wetlands (acres)	Stream Impacts (linear feet)
1	17+60-L-	0.77	154
	18+20-L-	0.44	26
	18+60-L-LT	---	121
2	32+85 RT to 33+65 RT	0.05	---
3	33+38 LT to 34+16 LT	0.36	---
4	37+20 LT to 37+85 LT	0.04	---
5	Watson Lake Road	0.03	
<b>TOTAL</b>		<b>1.69</b>	<b>301</b>

Please send the letter of confirmation to Richard Spencer at U.S. Army Corps of Engineers Wilmington Regulatory Field Office, Post Office Box 1890, Wilmington, North Carolina 28402-1890. Mr. Spencer's FAX number is 910-251-4025. The current let date for the project is October 19, 2004.

In order to satisfy regulatory assurances that mitigation will be performed; the N.C. Division of Water Quality (DWQ) requires a formal letter from EEP indicating willingness and ability to provide the

mitigation work requested by NCDOT. The NCDOT requests such a letter of confirmation be addressed to Mr. John Hennessy of the DWQ, with copies submitted to NCDOT.

If you have any questions or need additional information please do not hesitate to call Rachelle Beauregard at 919-715-1383.

Sincerely,

A handwritten signature in black ink, appearing to read "G. J. Thorpe".

*For*

Gregory J. Thorpe, Ph.D.,

Environmental Management Director

Project Development & Environmental Analysis Branch

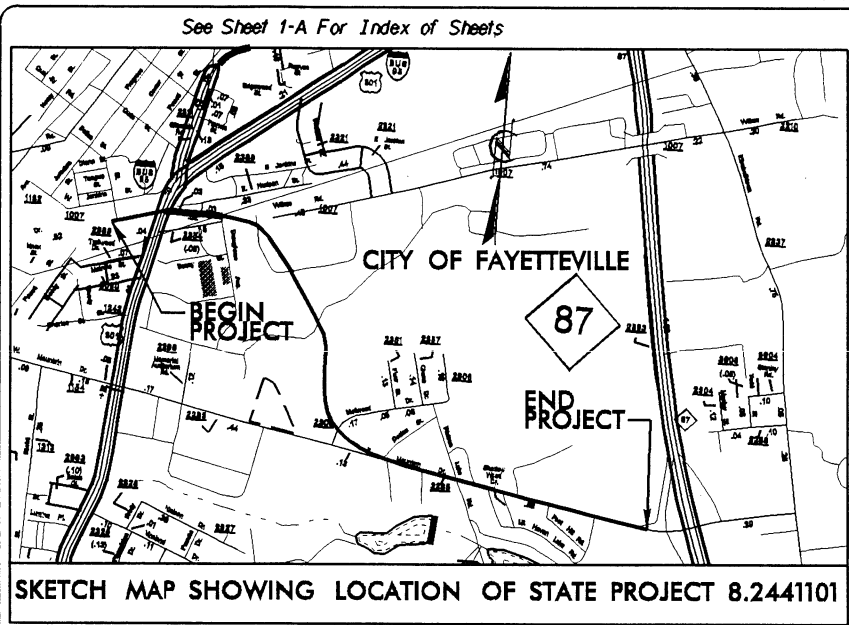
cc: Mr. Richard Spencer, USACE, Wilmington  
Mr. John Hennessy, NCDWQ  
Mr. Travis Wilson, NCWRC  
Ms. Becky Fox, USEPA – Whittier, NC  
Mr. Gary Jordan, USFWS  
file: U-2912

9/09/99

U-2912

PROJECT: C201010

25-JUN-2004 14:54  
106010236-18203024  
106010236-18203024



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**CUMBERLAND COUNTY**

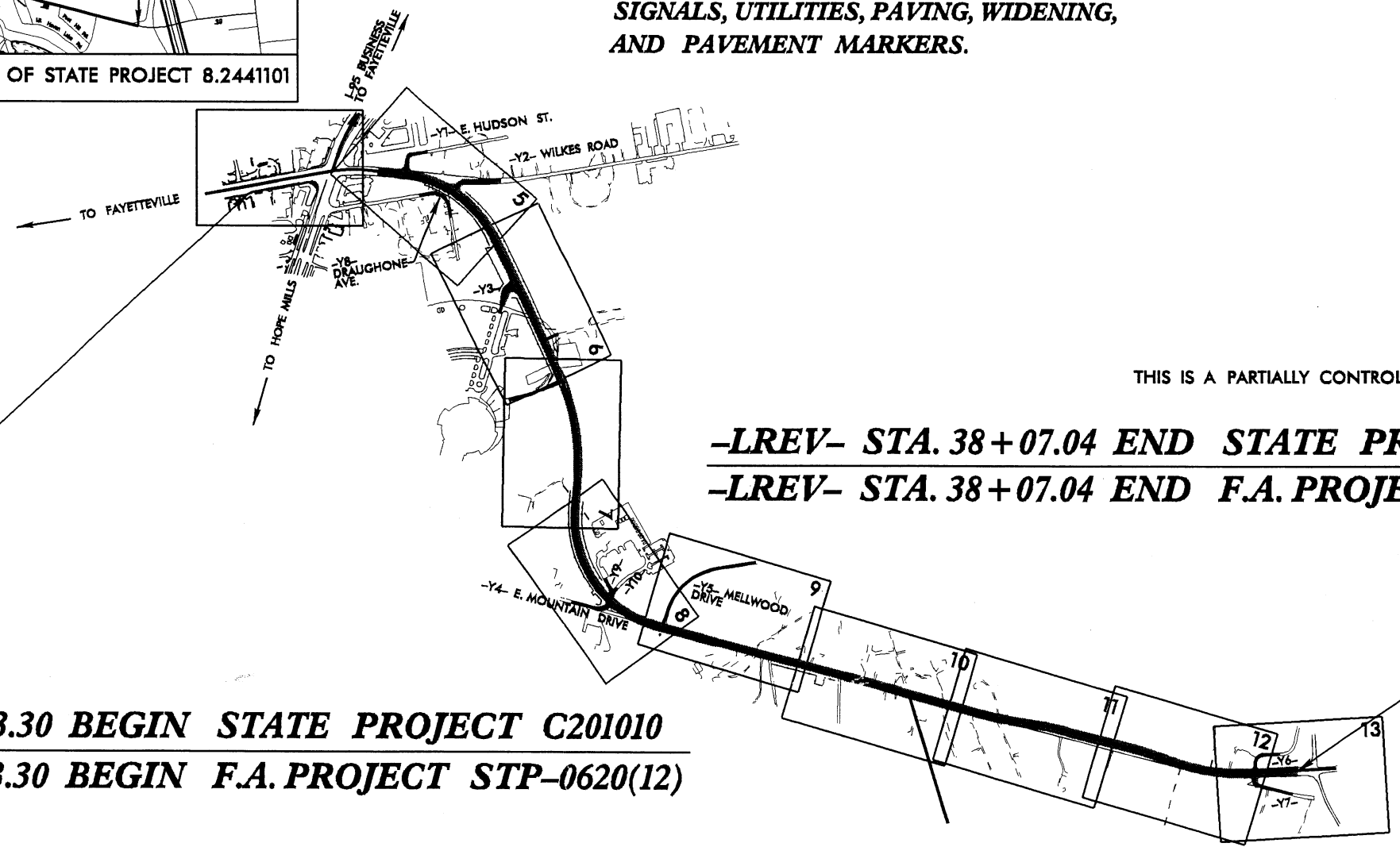
**LOCATION:** OWEN DRIVE EXTENSION FROM EAST OF  
I-95 BUSINESS/US 301 TO NC 87 AT EAST  
MOUNTAIN DRIVE

**TYPE OF WORK:** GRADING, DRAINAGE, CURB & GUTTER  
SIGNALS, UTILITIES, PAVING, WIDENING,  
AND PAVEMENT MARKERS.

**METRIC**

ALL DIMENSIONS IN  
THESE PLANS ARE IN METERS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2912	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34885.1.1	STP-0620 (1)	P.E.	
34885.2.1	STP-0620(1)	R/W, UTIL.	
C201010	STP-0620(12)	CONSTR.	



THIS IS A PARTIALLY CONTROLLED ACCESS PROJECT.

**-LREV- STA. 38+07.04 END STATE PROJECT C201010**  
**-LREV- STA. 38+07.04 END F.A. PROJECT STP-0620(12)**

**-LREV- STA. 6+93.30 BEGIN STATE PROJECT C201010**  
**-LREV- STA. 6+93.30 BEGIN F.A. PROJECT STP-0620(12)**

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**GRAPHIC SCALES**

5 0 10  
PLANS

5 0 10  
PROFILE (HORIZONTAL)

1 0 2  
PROFILE (VERTICAL)

**DESIGN DATA**

ADT 2004 = 10468  
ADT 2024 = 14308  
DHV = 10 %  
D = 60 %  
T = 8 % \*  
V = 80 km/h  
\* TTST 3% DUAL 5%

**PROJECT LENGTH**

LENGTH OF ROADWAY F.A. PROJECT STP-0620(12) = 3.114 km  
TOTAL LENGTH STATE PROJECT C201010 = 3.114 km

Prepared In the Office of:

**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh, NC 27610

2002 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
SEPT. 30, 2002

**LETTING DATE:**  
OCT. 19, 2004

**J.S. GOODNIGHT**  
PROJECT ENGINEER

**T.D. GOINS**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.


**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

SIGNATURE: \_\_\_\_\_ P.E.

**STATE DESIGN ENGINEER**  
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED  
DIVISION ADMINISTRATOR

DATE



PROJECT REFERENCE NO.

U-2912

SHEET NO.

4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS

CONST. REV.

R/W REV.

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY MOGS FOR MONUMENT "SEVEN"

WITH NAD 83 STATE PLANE GRID COORDINATES OF  
NORTHING: 138173.482m EASTING: 622122.922m

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988431

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "SEVEN" TO -LREV- STATION 6+00.00 IS  
N 50° 57' 12.934" W AT 4216.18m

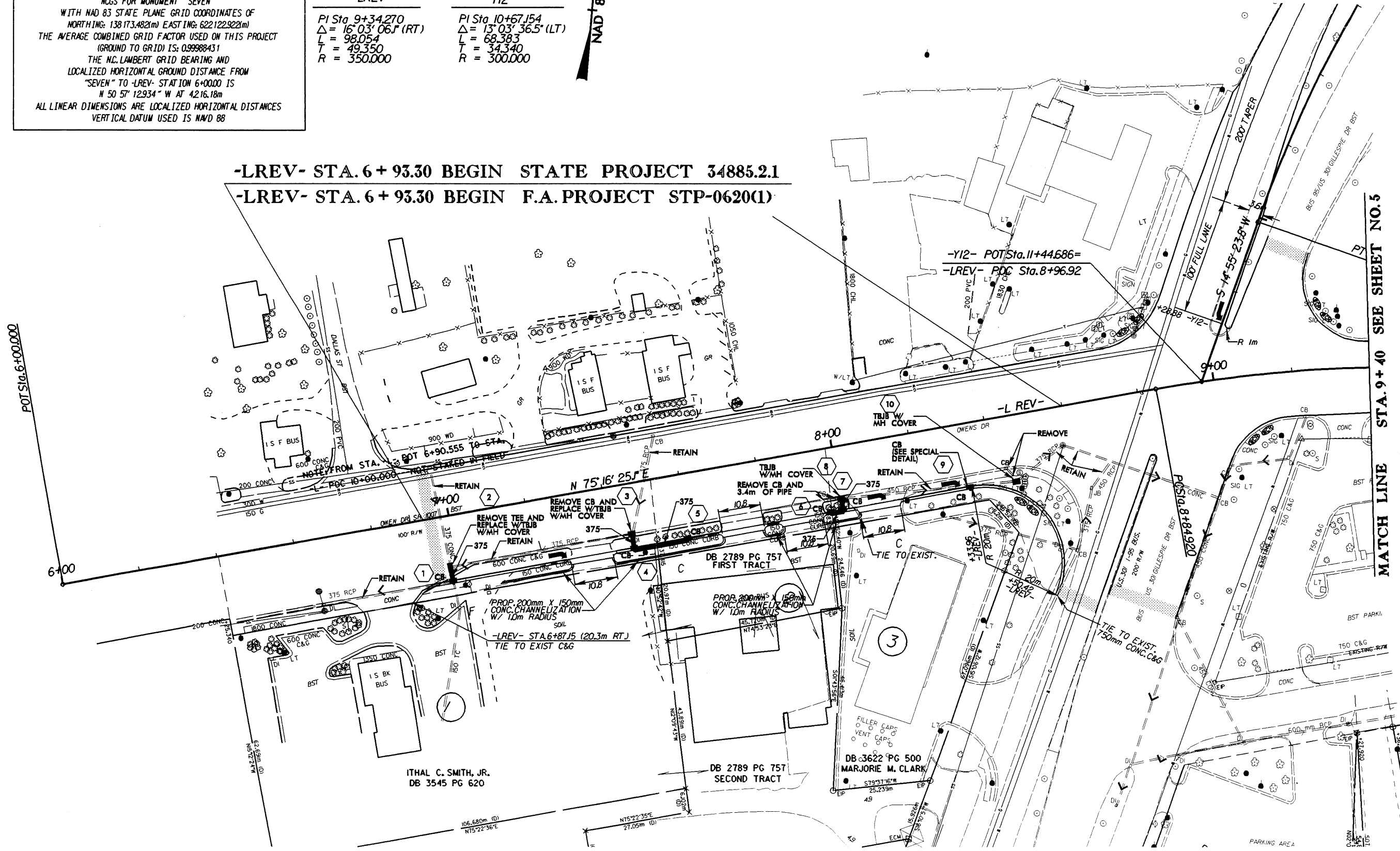
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88

-LREV-	-Y12-
PI Sta 9+34.270	PI Sta 10+67.154
$\Delta = 16^{\circ} 03' 06.1" (RT)$	$\Delta = 13^{\circ} 03' 36.5" (LT)$
L = 98.054	L = 68.383
T = 49.350	T = 34.340
R = 350.000	R = 300.000



-LREV- STA. 6 + 93.30 BEGIN STATE PROJECT 34885.2.1

-LREV- STA. 6 + 93.30 BEGIN F.A. PROJECT STP-0620(1)



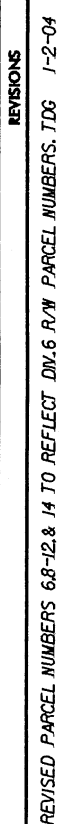
MATCH LINE STA. 9+40 SEE SHEET NO. 5

REVISIONS

REVISED EXISTING R/W ON PARCELS 1-3, TDG 1-13-03

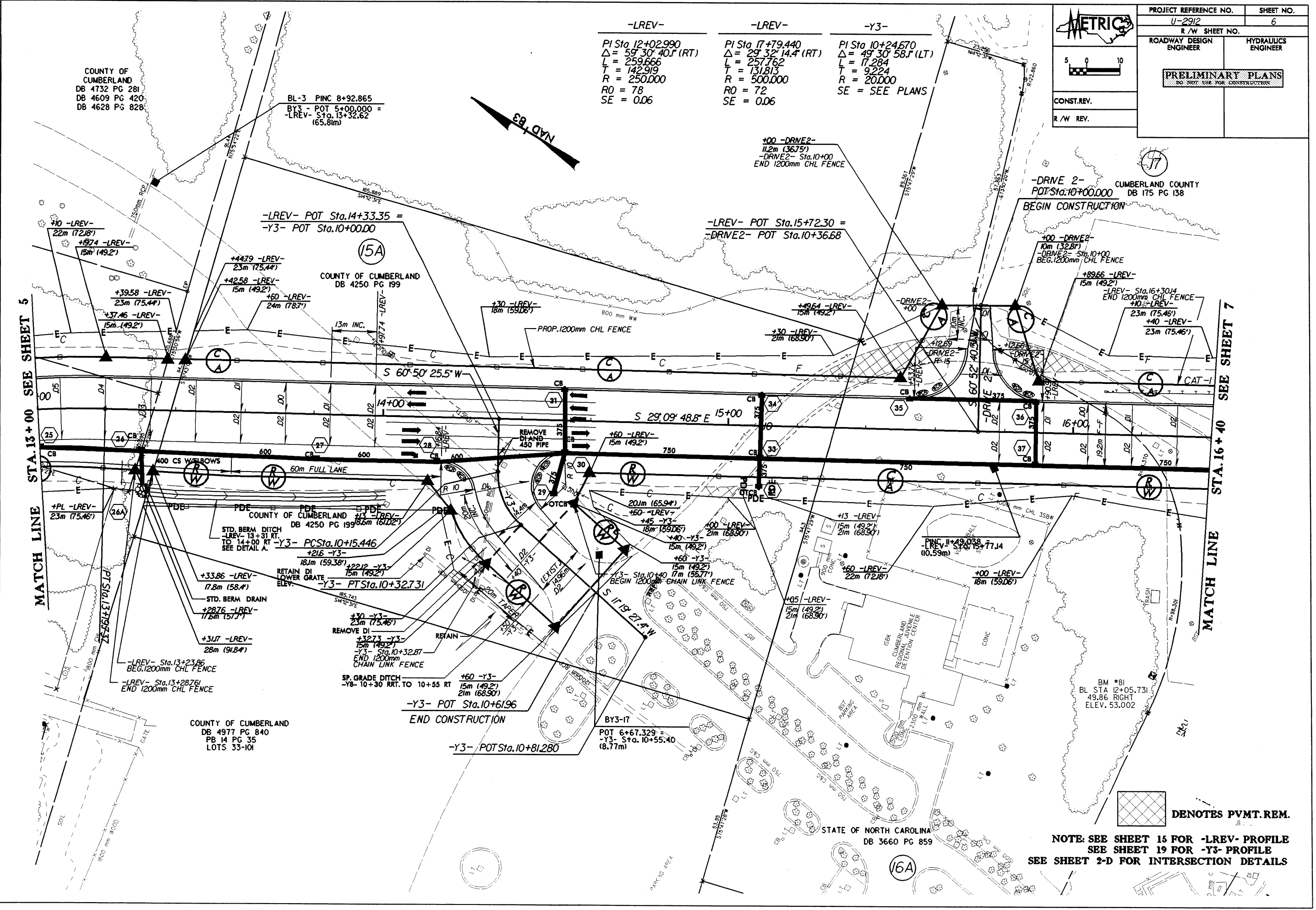
POT Sta. 6+00.000

8-11-2004 JMS  
8-11-2004 JMS  
8-11-2004 JMS



NOTE: SEE SHEET 14 FOR -LREV- PROFILE  
ENT SEE SHEET 19 FOR -Y1- PROFILE  
SEE SHEET 19 FOR -Y2- PROFILE  
SEE SHEET 20 FOR -Y8- PROFILE  
SEE SHEET 2-C FOR INTERSECTION DETAILS

REVISIONS  
REVISED PARCEL NUMBERS 15 & 16 TO REFLECT DM-6 R/W PARCEL NUMBERS. TDG 1-2-04

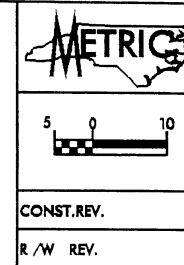




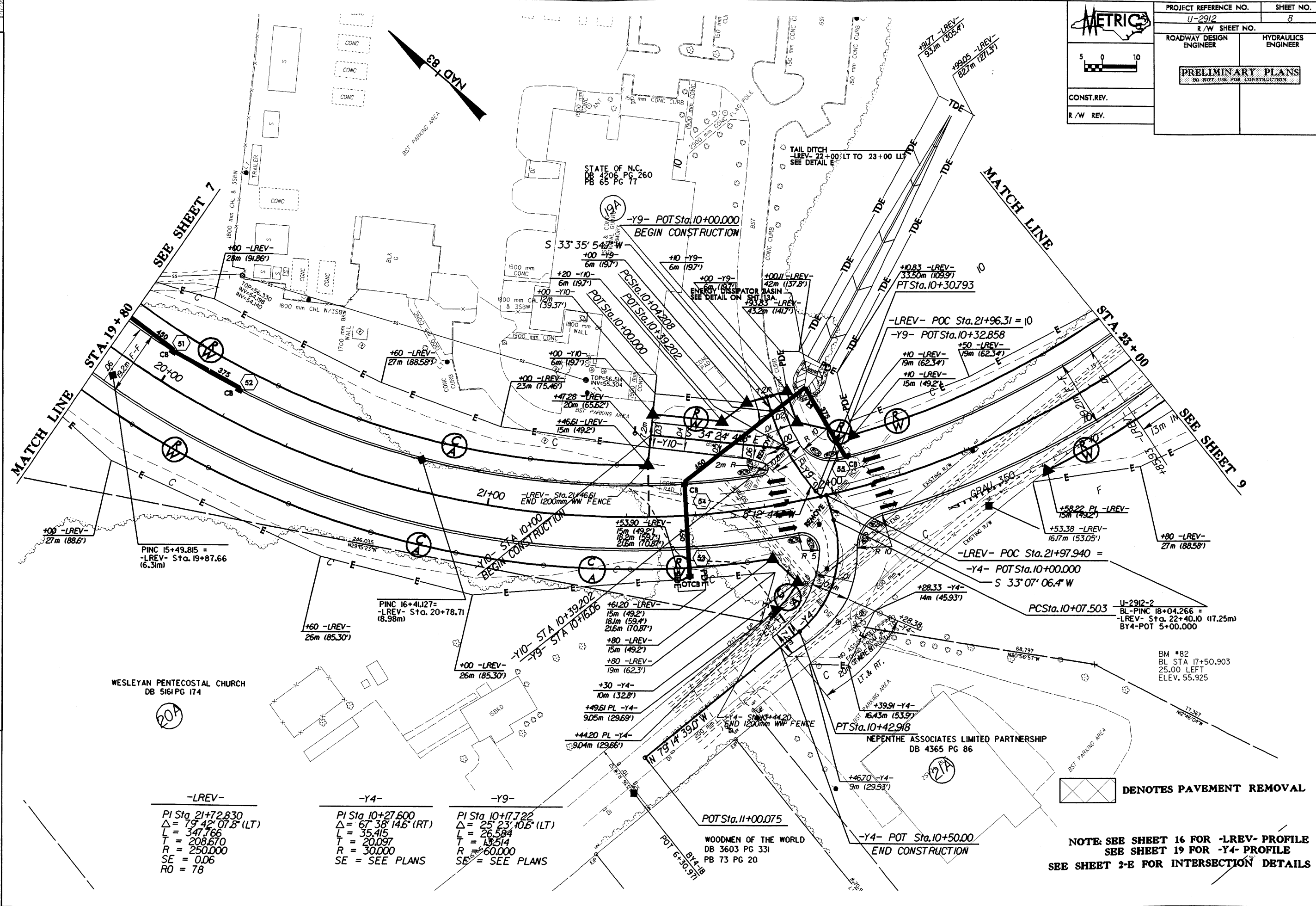


8-17-99

REVISIONS  
REVISED PARCELS 19-21 TO REFLECT DV.6 R/W PARCEL NUMBERS. TDG 1-2-04



PROJECT REFERENCE NO.	SHEET NO.
U-2912	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
CONST. REV.	
R/W REV.	




-LREV-	-Y4-	-Y9-
PI Sta 21+72.830 $\Delta = 79^\circ 42' 07.8''$ (LT) L = 347.766 T = 208.670 R = 250.000 SE = 0.06 RO = 78	PI Sta 10+27.600 $\Delta = 67^\circ 38' 14.6''$ (RT) L = 35.415 T = 20.097 R = 30.000 SE = SEE PLANS	PI Sta 10+17.722 $\Delta = 25^\circ 23' 10.6''$ (LT) L = 26.584 T = 13.514 R = 60.000 SE = SEE PLANS

DENOTES PAVEMENT REMOVAL

NOTE: SEE SHEET 16 FOR -LREV- PROFILE  
SEE SHEET 19 FOR -Y4- PROFILE  
SEE SHEET 2-E FOR INTERSECTION DETAILS





5 0 10

CONST. REV.  
R/W REV.

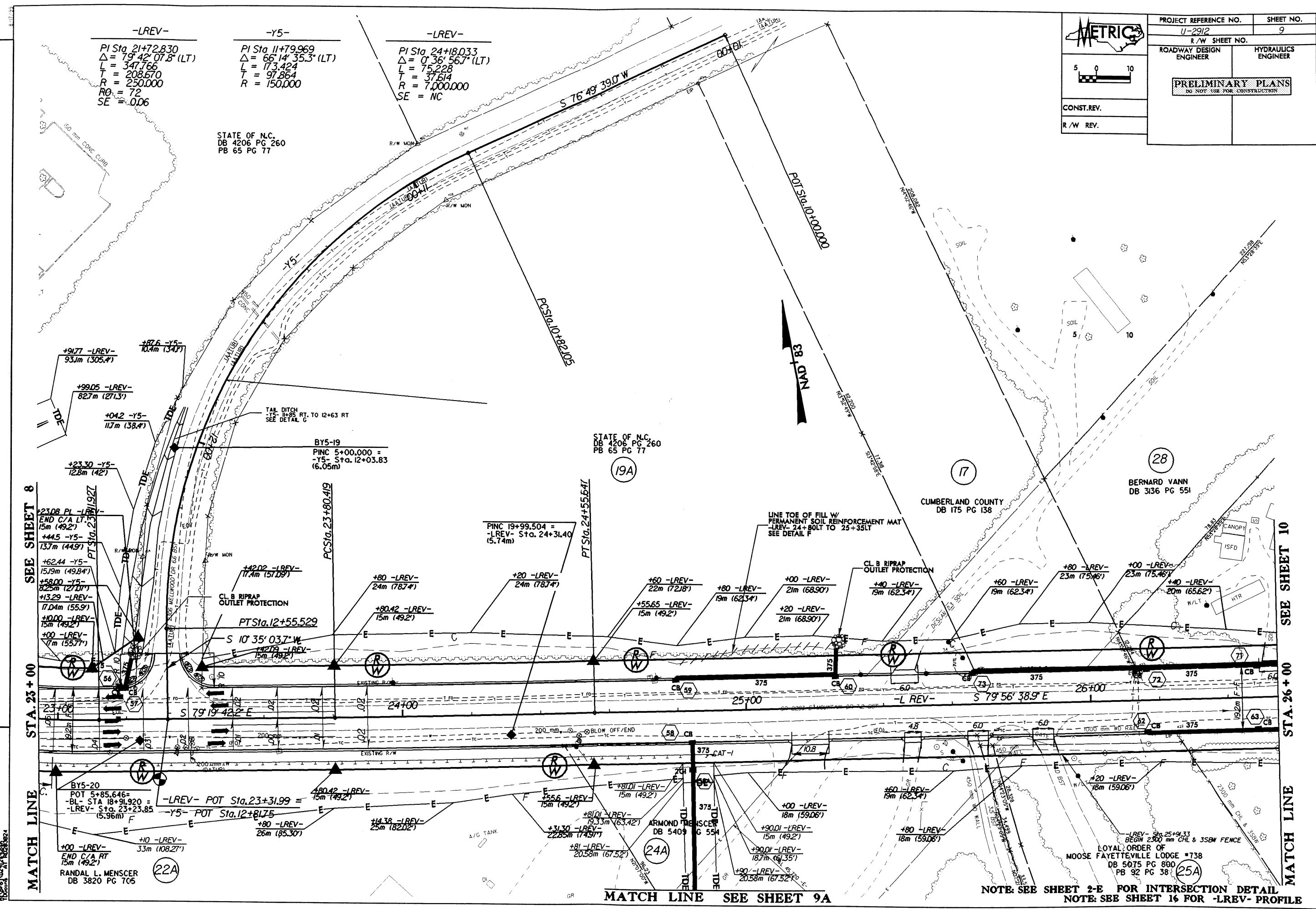
PROJECT REFERENCE NO.  
U-2912

R/W SHEET NO.  
9

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



REVISIONS  
REVISED PARCELS 22-27 TO REFLECT DIV. 6 R/W PARCEL NUMBERS. TDS 1-2-04

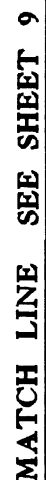
MATCH LINE  
STA. 23+00  
SEE SHEET 8

MATCH LINE  
STA. 26+00  
SEE SHEET 10

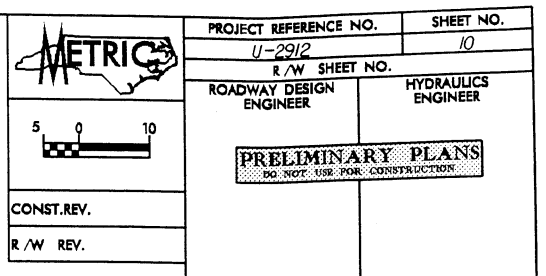
MATCH LINE  
SEE SHEET 9A

NOTE: SEE SHEET 2-E FOR INTERSECTION DETAIL  
NOTE: SEE SHEET 16 FOR -LREV- PROFILE

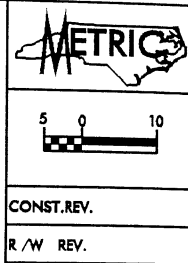
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



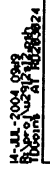
## REVISIONS



**NOTE: SEE SHEET 17 FOR -LREV- PROFILE**



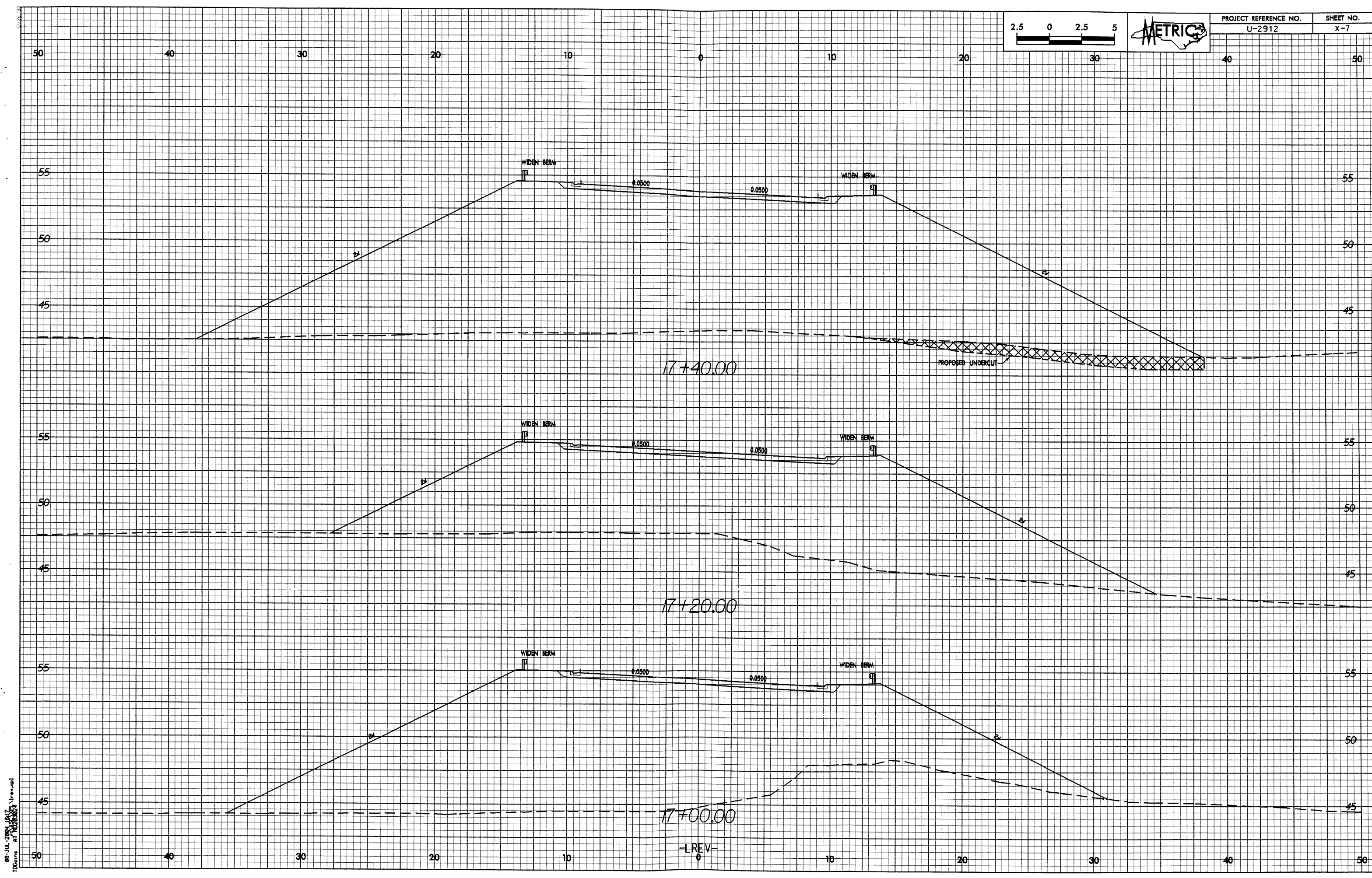




**NOTE: SEE SHEET 18 FOR -LREV- PROFILE**



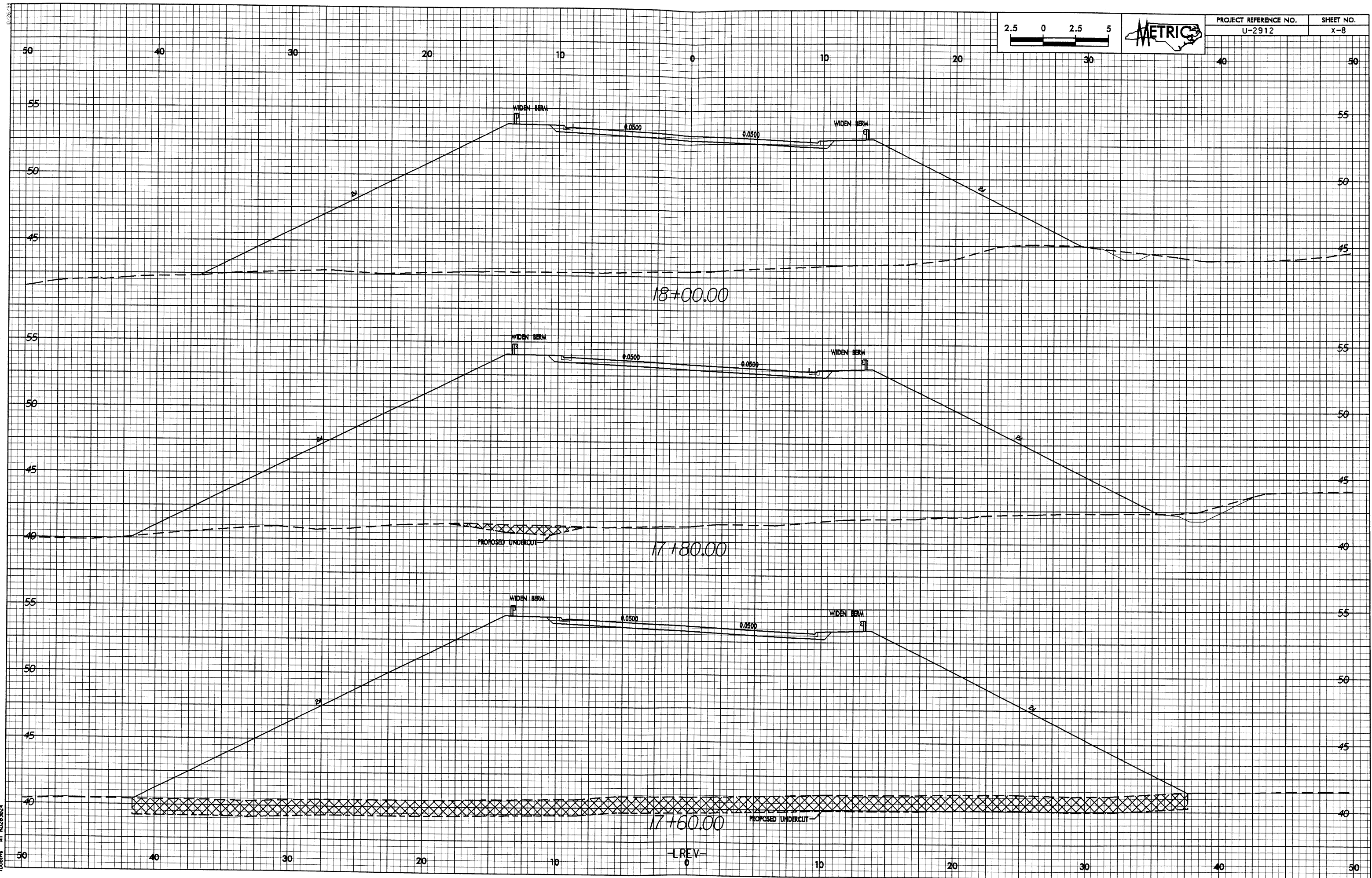




08-JUL-2004 16:17  
100m AT 100m



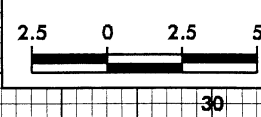
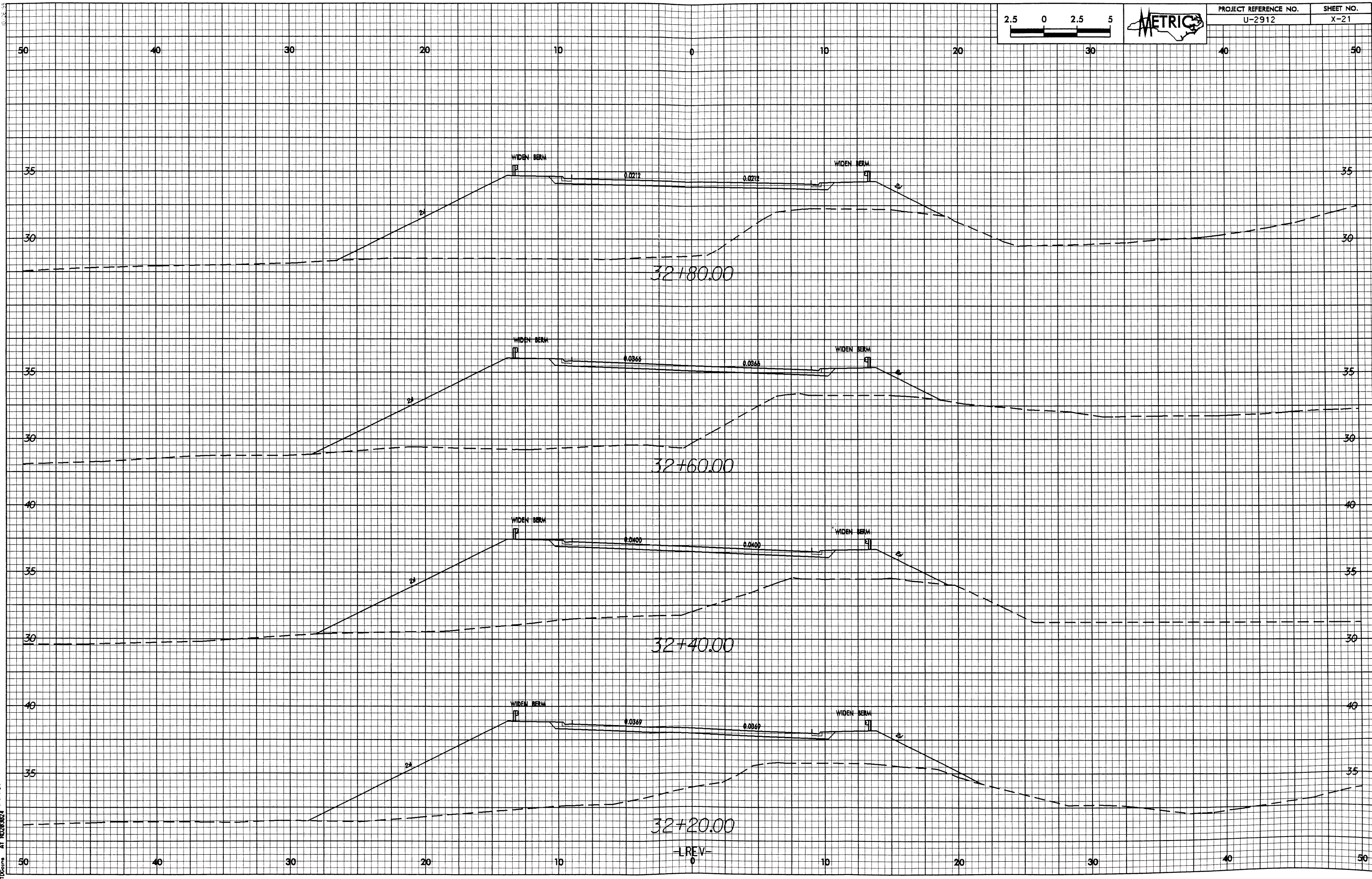
08-JUL-2004 15:17  
T:\corrs at 1000000



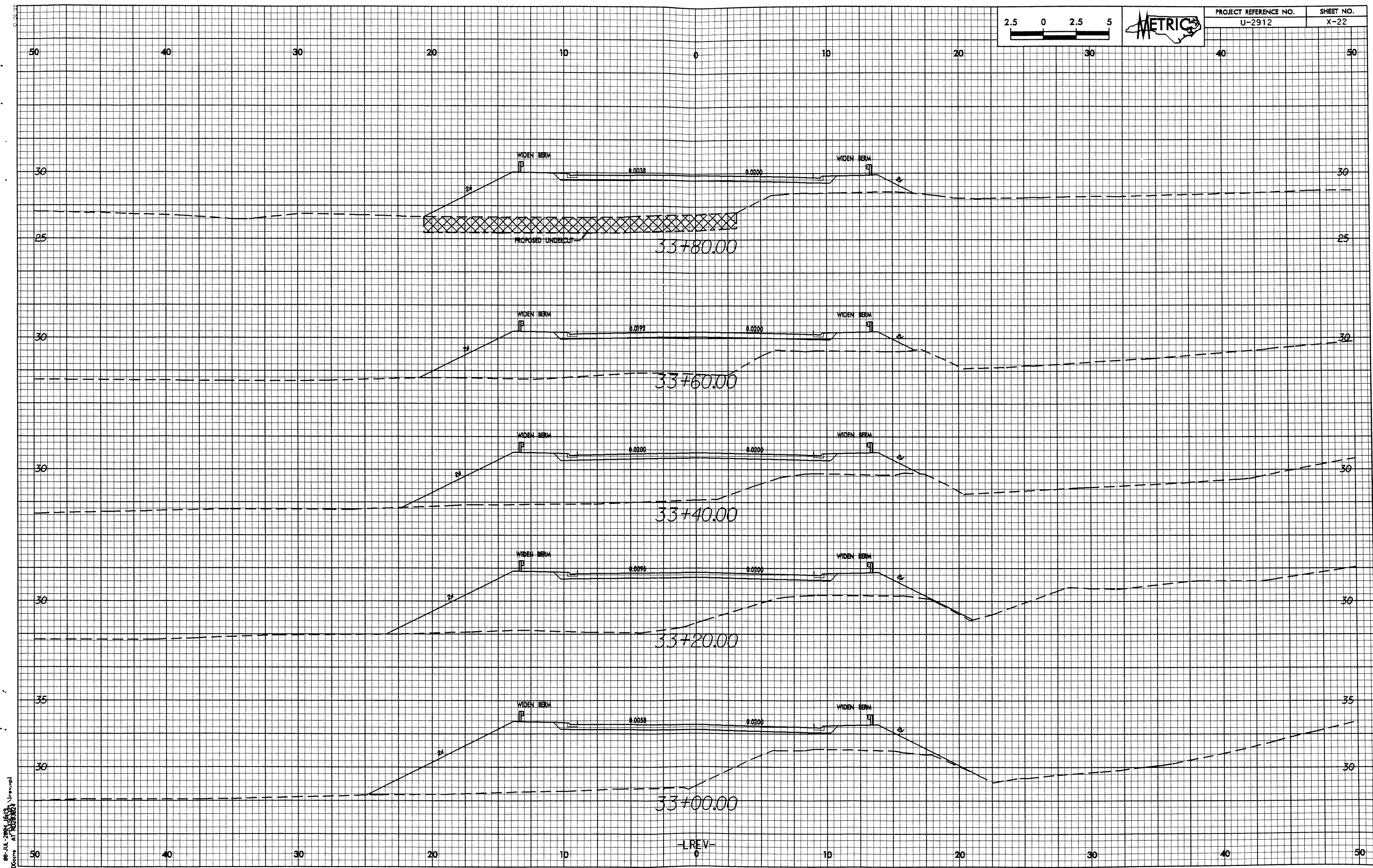




08-114-2884 (5/18)  
100cms At 1000000

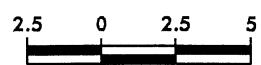
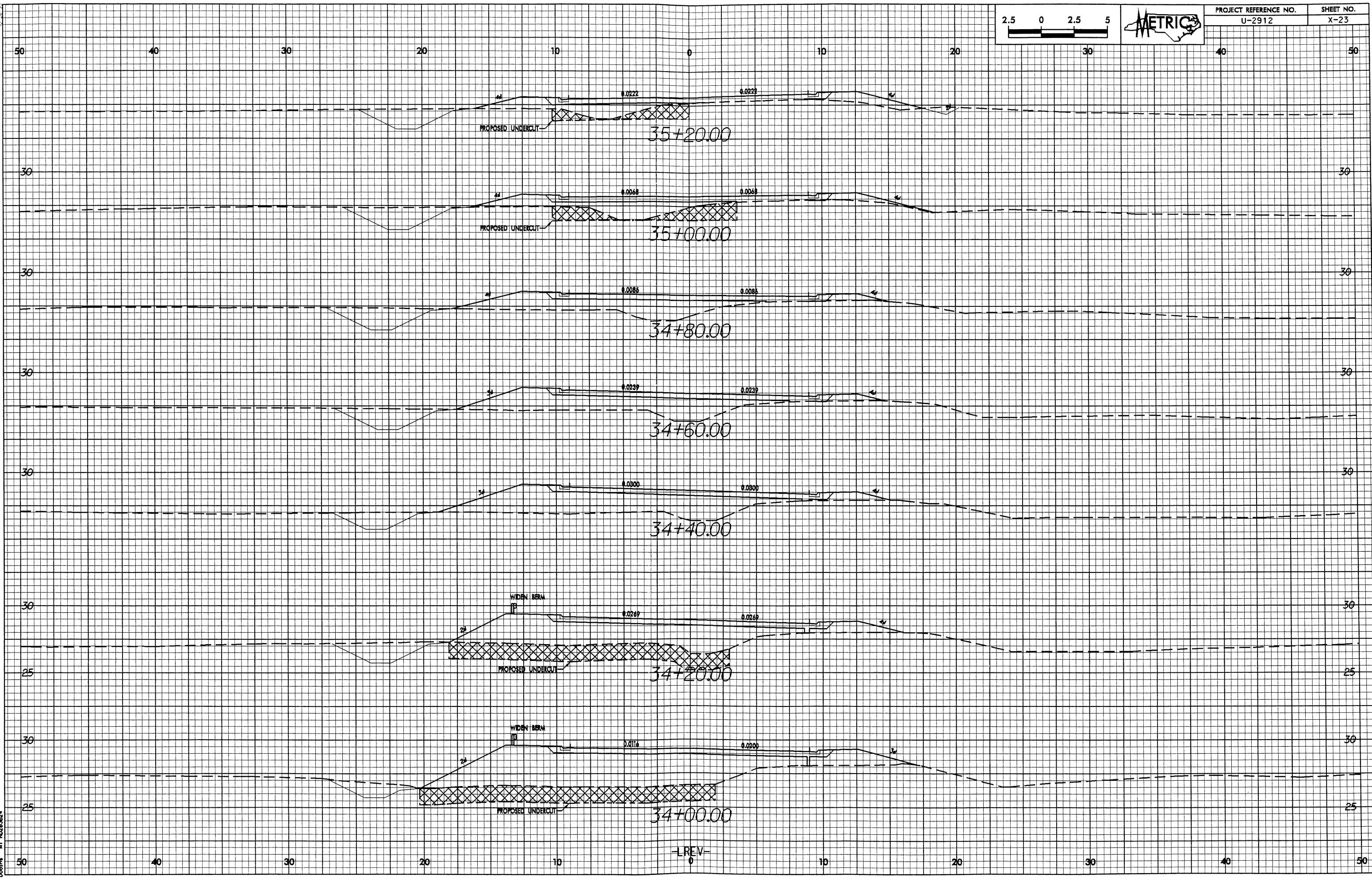


PROJECT REFERENCE NO.	SHEET NO.
U-2912	X-21





88-JUL-2004 16:13 1000m AT 1000m



PROJECT REFERENCE NO. U-2912 SHEET NO. X-23

35+20.00

35+00.00

34+80.00

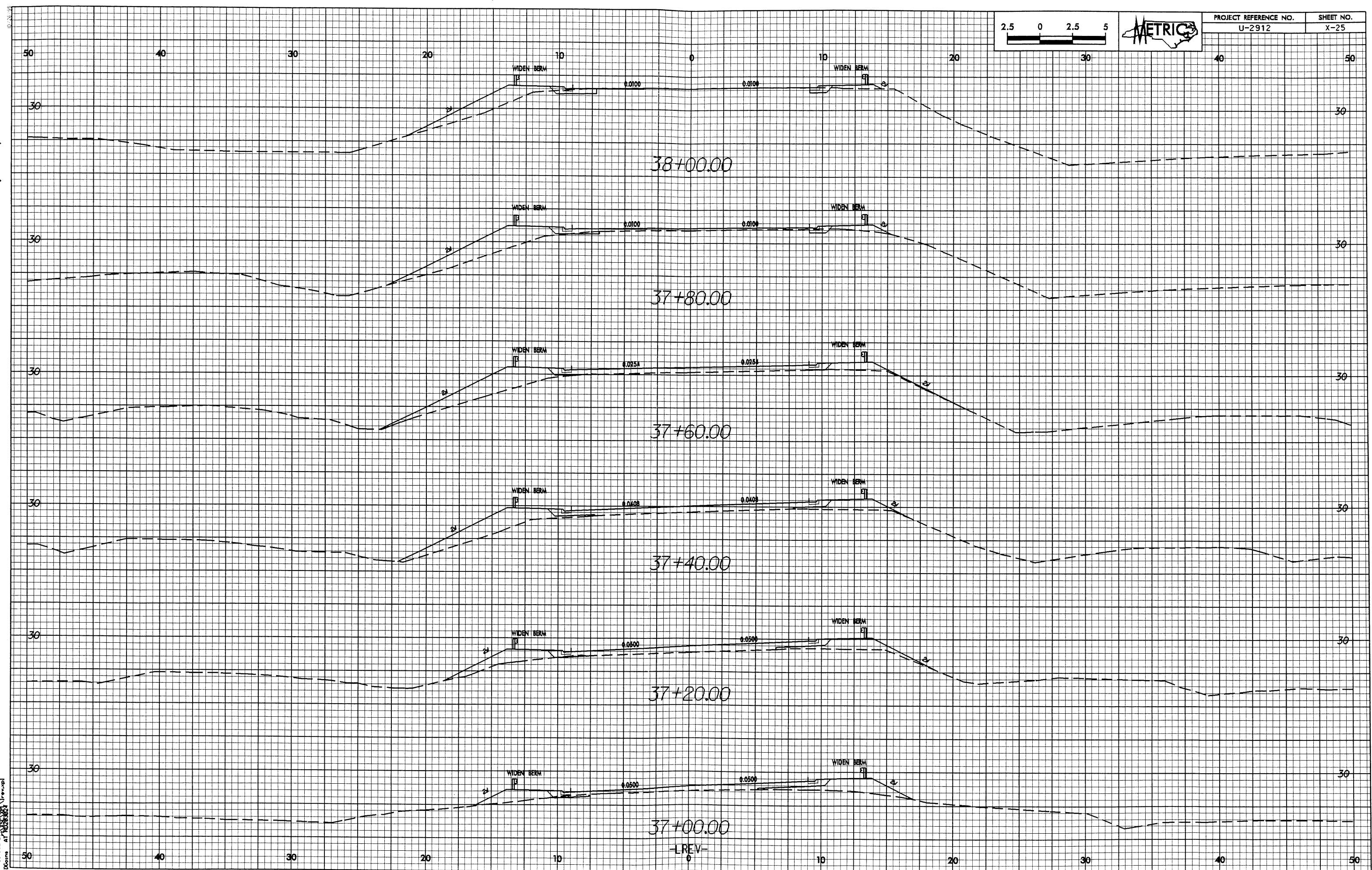
34+60.00

34+40.00

34+20.00

34+00.00

-LREV-



88-JUL-2004 15:30  
TDC:ams A170000000

